What is claimed is:

1. A pair of FRET hybridization probes hybridizing adjacently to a target nucleic acid sequence, a first member of said pair of hybridization probes comprising:

a nucleotide sequence entity which is substantially complementary to the sequence of the target nucleic acid;

a fluorescent entity, said entity being either a FRET donor entity or a FRET acceptor entity; and

a spacer entity connecting said nucleotide sequence entity and said fluorescent entity, said spacer entity comprising a connecting chain of at least 15 atoms, wherein 2 atoms of said connecting chain of at least 15 atoms comprise negatively charged substituents.

2. A pair of FRET hybridization probes according to Claim 1, wherein said spacer entity comprises between 1-10 A, T, or C nucleotide residues having a sequence non-complementary to the target DNA.

3. A pair of FRET hybridization probes hybridizing adjacently to a target nucleic acid sequence, comprising

a first member of said pair of FRET hybridization probes comprising:

a nucleotide sequence entity which is substantially complementary to the sequence of the target nucleic acid;

a fluorescent entity, said entity being a FRET donor entity;

a first spacer entity connecting said nucleotide sequence entity and said first fluorescent entity;

a second member of said pair of FRET hybridization probes comprising

a nucleotide sequence entity which is substantially complementary to the sequence of the target nucleic acid;

a second fluorescent entity, said second fluorescent entity being a FRET acceptor entity;

a second spacer entity connecting said nucleotide sequence entity and said fluorescent entity, said second spacer entity being different from said first spacer entity;

wherein the length of said first spacer entity and the length of said second spacer entity differ in size at least by a connecting chain of 15 atoms.

4. A pair of FRET hybridization probes hybridizing adjacently to a target nucleic acid sequence comprising:

a the first member of said pair of FRET hybridization probes comprising:

a nucleotide sequence entity which is substantially complementary to the sequence of the target nucleic acid;

a fluorescent entity, said entity being a FRET donor entity;

a spacer entity connecting said nucleotide sequence entity and said fluorescent entity, said spacer entity comprising a number of n1=1-15 nucleotide residues non-complementary to the target DNA;

the second member of said pair of FRET hybridization probes comprising:

a nucleotide sequence entity which is substantially complementary to the sequence of the target nucleic acid;

a fluorescent entity, said entity being a FRET acceptor entity;

a spacer entity connecting said nucleotide sequence entity and said fluorescent entity, said spacer entity comprising a number of n2=1-15 nucleotide residues non-complementary to the target DNA;

wherein the value of n1 differs from the value of n2 by a natural number between 1 and 10.

5. A set of at least three oligonucleotides, comprising:

a first oligonucleotide and a second oligonucleotide, said first oligonucleotide and said second oligonucleotide being capable of acting as a pair of amplification primers for a template dependent nucleic acid amplification reaction, each of said first oligonucleotide and said third oligonucleotide being labeled with one corresponding member of a FRET pair consisting of a FRET donor entity and a FRET acceptor entity;

one of said first said oligonucleotide or said third oligonucleotide comprising:

a nucleotide sequence entity which is substantially complementary to the sequence of the target nucleic acid;

a fluorescent entity, said entity being either the FRET donor entity or the FRET acceptor entity;

a spacer entity connecting said nucleotide sequence entity and said fluorescent entity;

wherein said spacer entity comprises a connecting chain of at least 15 atoms.

6. A composition comprising a nucleic acid sample and a pair of hybridization probes according to any of Claims 1-5.

7. A kit comprising hybridization probes according to any of Claims 1-5 and at least one other component selected from a group consisting of nucleic acid amplification primers, template dependent nucleic acid polymerase, deoxynucleoside triphosphates and a buffer for template dependent nucleic acid amplification reaction.

8. A method for detection of a nucleic acid sequence in a biological sample, comprising hybridizing a nucleic acid present in said sample with hybridization probes according to any of Claims 1-5, and detecting an emission from said hybridization probes.

9. A method according to Claim 8, further comprising amplifying a part of said nucleic acid present in said sample, wherein a target nucleic acid sequence substantially complementary to the sequences of said hybridization probes is amplified by a nucleic acid amplification reaction.

10. A method according to Claim 9, wherein fluorescence emission of at least one hybridization probe is monitored in real time.

11. A method for the determination of the melting profile of a hybrid consisting of a target nucleic acid and hybridization probes according to any of Claims 1-5, wherein the fluorescence emission is determined as a function of temperature.

12. A method for chemical solid phase synthesis of multiple oligonucleotides comprising:

a) preparation of a dye labeled CPG- (N)n, wherein
N is arbitrarily chosen nucleotide residues different from G, and n=1-10;
b) performing a first solid phase synthesis of a first oligonucleotide having a first sequence using the CPG prepared in step a); and
c) performing a second solid phase synthesis of at least a second oligonucleotide having a second sequence using the CPG prepared in step a).